

Operator's Manual

RC15, RC25, and RC35 Series
Rotary Cutter

Great Plains

Manufacturing, Inc.

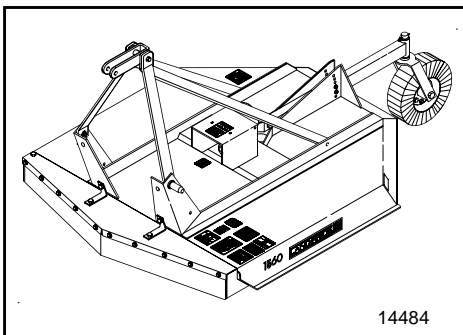
P.O. Box 5060 • Salina, Kansas 67402-5060



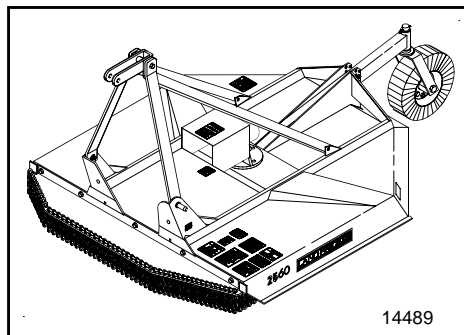
Read the Operator's manual entirely. When you see this symbol, the subsequent instructions and warnings are serious - follow without exception. Your life and the lives of others depend on it!

LAND PRIDE

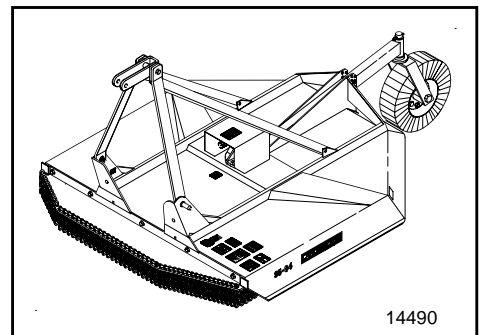
Model RC15



Model RC25



Model RC35



Cover illustration may show optional equipment not supplied with standard unit.

Table of Contents

Important Safety Information	1	Section 5 Maintenance and Lubrication .17	
Introduction	8	Maintenance	17
Using This Manual	8	Service Cutting Blades	17
Terminology:	8	Shearbolt Driveline	17
Definitions:	8	Walterscheid Slip Clutch Run-In	17
Owner Assistance	8	Eurocardan Clutch Run-In	17
Section 1 Assembly and Setup	9	Eurocardan Clutch Assembly & Disassembly	18
Tractor Requirements	9	Storage	18
Hitch Assembly	9	4-Plate Slip Clutch	19
RC15 Tailwheel	10	Disassembly	19
RC25 & RC35 Tailwheel	10	Assembly	19
Driveline Installation	10	2-Plate Slip Clutch	20
3-Point Tractor Hookup	10	Disassembly	20
Safety Guards	11	Assembly	20
Section 2 Operating Instructions	12	Lubrication	21
Transporting	12	Tailwheel Spindle Hub	21
Operating Check List	12	Tailwheel hub	21
Cutting Instructions	12	Driveline U-Joints	21
Section 3 Adjustments	13	Gearbox	22
Cutting Height	13	Driveline	22
Section 4 Troubleshooting	15	Section 6 Specifications and Capacities 23	
		Section 7 Appendix	26
		Torque Values Chart for Common Bolt Sizes	26
		Warranty	27

© Copyright 2008 All rights Reserved

Land Pride provides this publication "as is" without warranty of any kind, either expressed or implied. While every precaution has been taken in the preparation of this manual, Land Pride assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. Land Pride reserves the right to revise and improve its products as it sees fit. This publication describes the state of this product at the time of its publication, and may not reflect the product in the future. The illustrations in this manual are not intended for safe and proper assembly or disassembly of equipment. The illustrations are intended for ordering parts only.

Land Pride is registered trademark.

All other brands and product names are trademarks or registered trademarks of their respective holders.

Printed in the United States of America.

Important Safety Information

For your safety and to develop a better understanding of your equipment, thoroughly read the Operator's Sections of this manual before operation.

Safety Notations

The SAFETY ALERT SYMBOL indicates that there is a potential hazard to personal safety involved and extra safety precautions must be taken. When you see this symbol, be alert and carefully read the message that follows it. In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Watch for the following Safety Notations throughout your Operator's Manual:



DANGER!

Indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury. This signal word is limited to the most extreme situations.



WARNING!

Indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.



CAUTION!

Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury. It may also be used to alert against unsafe practices

Safety Rules

These rules and instructions must be reviewed at least annually by all operators!

Most accidents are the result of negligence and carelessness, caused by failure of the operator to follow safety precautions. Even though your implement is designed with many built-in safety features, the following precautions are mandatory to prevent such accidents.

Make sure everyone that uses this machine has read the Operator's Manual and understands how to operate it safely.

This Operator's Manual is considered a part of the implement and should remain so when loaned or sold.

Prior To Operation

1. Do not allow anyone to operate this machine who has not been properly trained in its safe operation.
2. Wear proper eye protection to prevent injury from flying objects.
3. To prevent personal injury caused by thrown objects, the use of front safety shields is strongly recommended.
4. Do not let children operate the implement.
5. Never allow passengers.
6. Do not leave the tractor or the implement unattended with the engine running.
7. Before cutting, clear the area of objects and debris that could become entangled in the blades or thrown from the cutter.

During Operation

1. Never operate the cutter near people and do not stand near the cutter while blades are in motion.
2. After striking an object, disengage PTO, shut off tractor and inspect for damage before continuing.
3. Do not operate the cutter in reverse unless necessary. Debris may be thrown from the front of the cutter; therefore, increasing the risk of injury to the operator.
4. Check the cutter periodically for loose hardware and tighten if necessary.
5. Never operate the cutter while in the raised transport position.
6. Disengage the PTO when raised for transport or backing up.
7. Travel slowly over rough terrain and be alert to holes and gullies.
8. Use warning flags or approved warning lights at night and during other periods of poor visibility. Do your best to prevent highway accidents.
9. Be alert to traffic when crossing or cutting near roadways. Always maintain complete control of the machine. Know your state and local laws concerning highway safety and regulations. Comply with these laws when transporting machinery.
10. Keep PTO shielding in place and in good condition. Do not operate cutter with shields missing.
11. Always use proper PTO speed or machine damage may result. This cutter is designed to be used with a tractor using a 540 rpm rear PTO.
12. In order to maintain steering control, add ballast to tractor. To determine the amount of ballast required refer to your tractor operator's manual.

During Maintenance

1. Before performing maintenance, disconnect PTO driveline and securely block cutter on safe supporting stands. Do not position stands under axle or wheel supports.

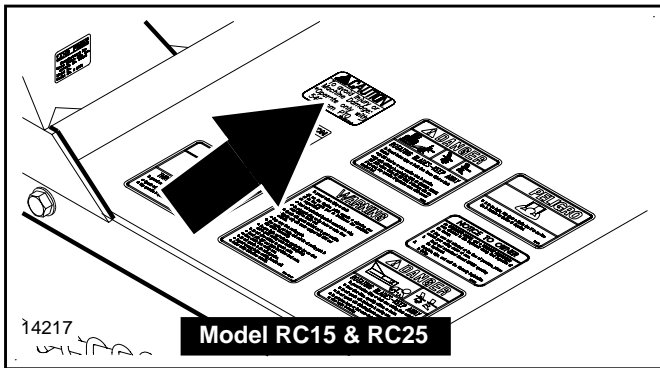
Important Safety Information

Safety Labels

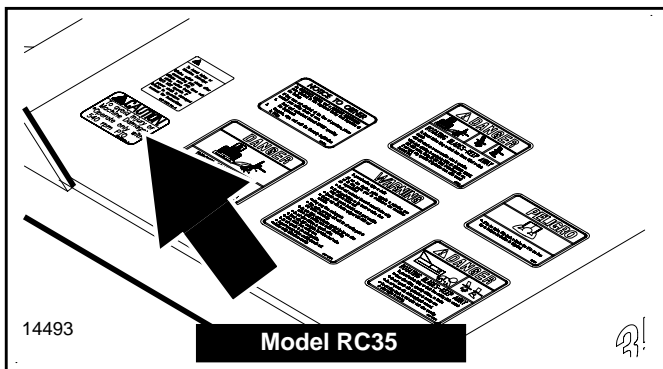
Your implement comes equipped with all safety labels in place. They were designed to help you safely operate your implement.

1. Read and follow label directions.
2. Keep all safety labels clean and legible.
3. Replace all damaged or missing labels.
4. Some new equipment installed during repair require safety labels to be affixed to the replaced component as specified

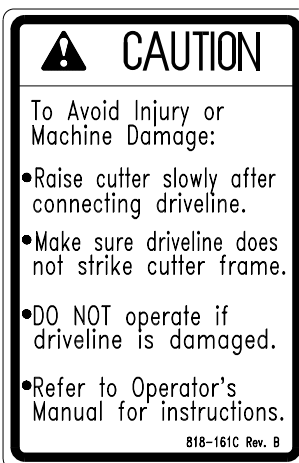
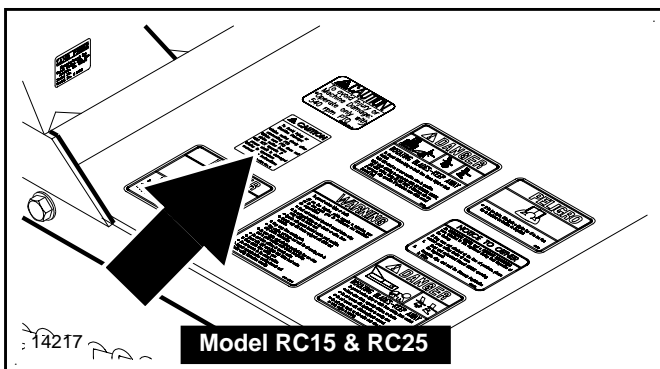
- by the manufacturer. When ordering new components make sure the correct safety labels are included in the request. To order new labels go to your Land Pride dealer.
5. Refer to this section for proper label placement. To install new labels:
 - a. Clean the area the label is to be placed.
 - b. Peel backing from label. Press firmly on surface being careful not to cause air bubbles under label.



818-130C
Caution 540 RPM

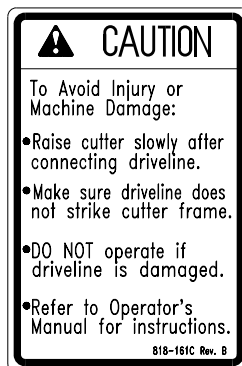
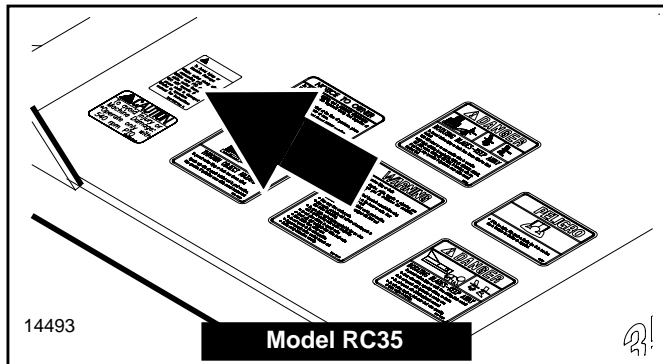


818-130C
Caution 540 RPM

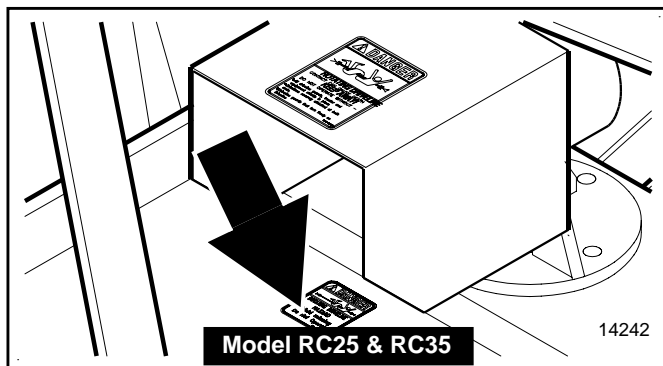


818-161C
Caution Rotary Cutter
General Safety

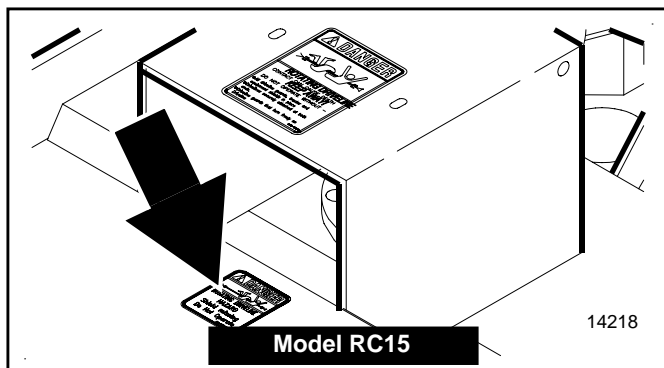
Important Safety Information



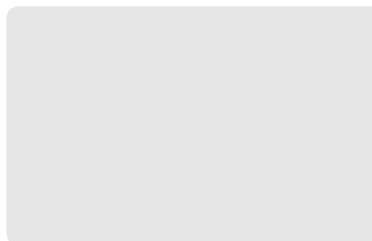
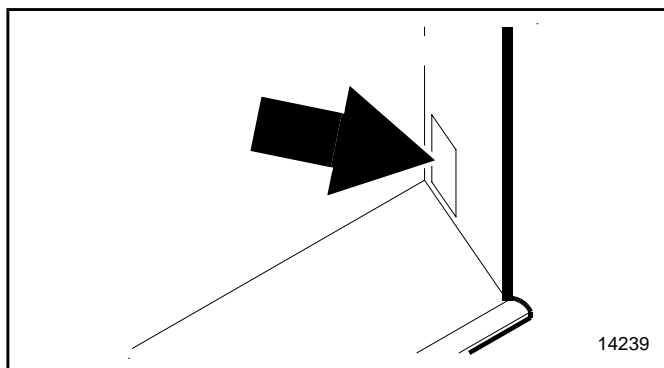
818-161C
Caution Rotary Cutter
General Safety



818-187C
Danger PTO Shield

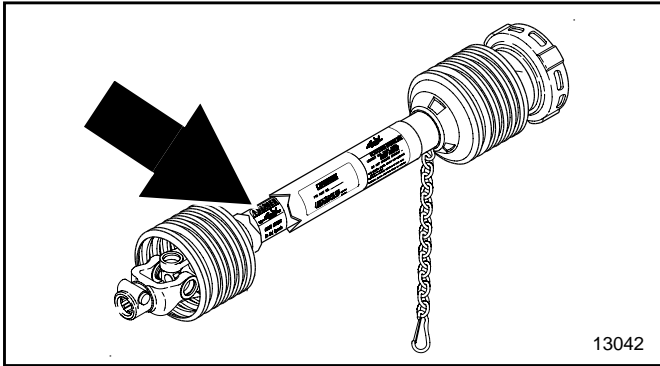


818-187C
Danger PTO Shield

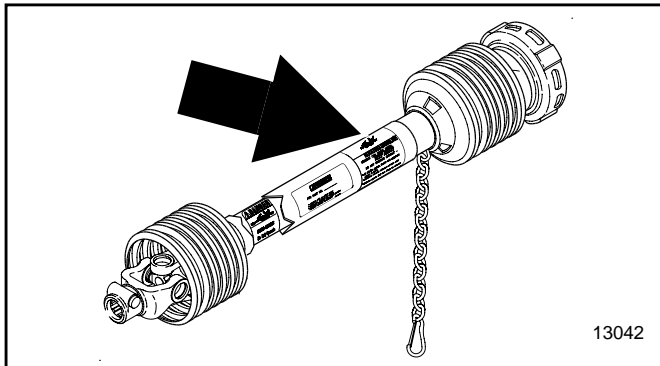


818-229C
Amber Reflector

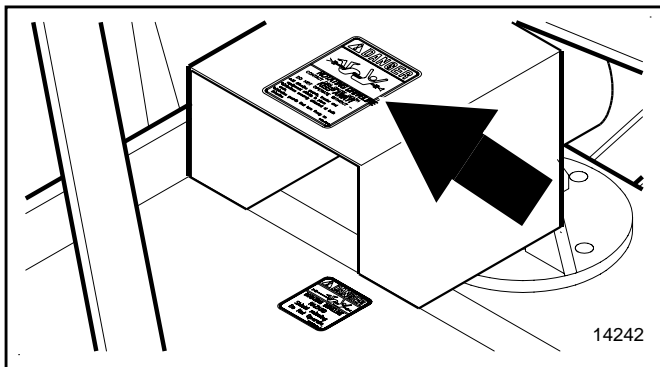
Important Safety Information



818-540C
Danger Guard Missing

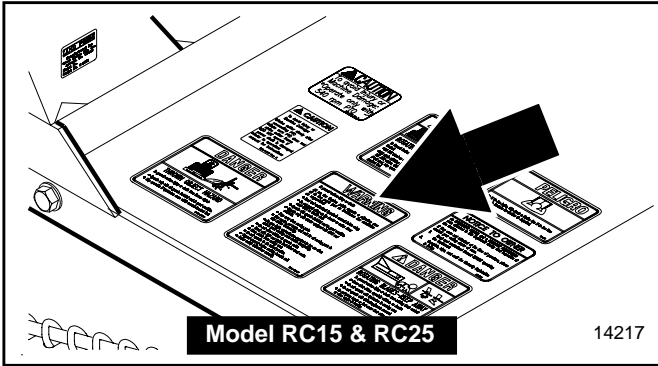


818-552C
Danger PTO Driveline



818-552C
Danger PTO Driveline

Important Safety Information



WARNING

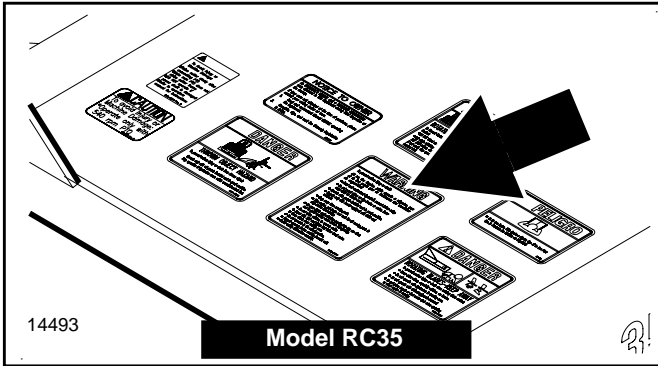
To prevent serious injury or death:

- Read and understand Operator's Manual before using. Review annually.
- Do not permit riders on the tractor or mower. Never carry children on tractor seat.
- Do not allow children to operate mower.
- Operate only with guards installed and in good condition.
- Keep away from moving parts.
- Operate only with tractor equipped with ROPS and seatbelts.
- Before mowing, clear debris from mowing area.
- Do not operate in the raised position.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Support mower securely before working beneath unit.
- Transport with clean reflectors, SMV and working lights as required by Federal, state, and local laws.

Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

818-554C

818-554C
Warning General
Cutter Safety



WARNING

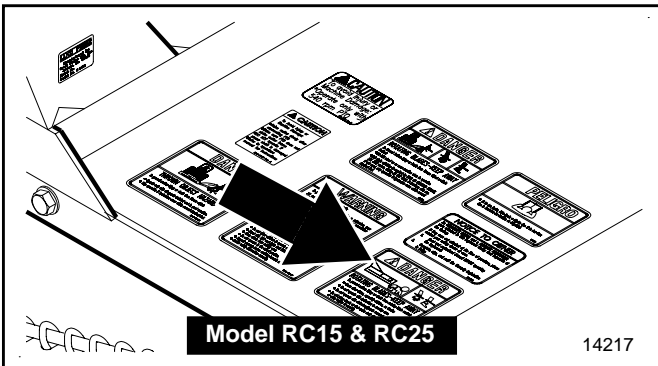
To prevent serious injury or death:

- Read and understand Operator's Manual before using. Review annually.
- Do not permit riders on the tractor or mower. Never carry children on tractor seat.
- Do not allow children to operate mower.
- Operate only with guards installed and in good condition.
- Keep away from moving parts.
- Operate only with tractor equipped with ROPS and seatbelts.
- Before mowing, clear debris from mowing area.
- Do not operate in the raised position.
- Stop engine, set brake and wait for all moving parts to stop before dismounting.
- Support mower securely before working beneath unit.
- Transport with clean reflectors, SMV and working lights as required by Federal, state, and local laws.

Si no lee ingles, pida ayuda a alguien que si lo lea para que le traduzca las medidas de seguridad.

818-554C

818-554C
Warning General
Cutter Safety



DANGER

ROTATING BLADES—KEEP AWAY

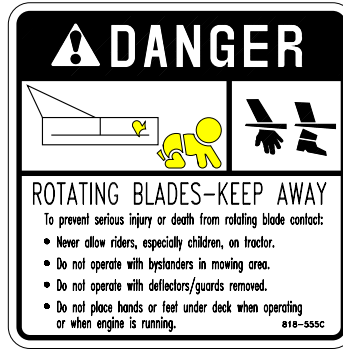
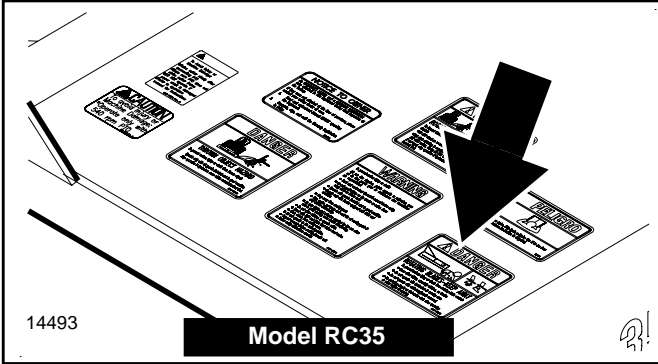
To prevent serious injury or death from rotating blade contact:

- Never allow riders, especially children, on tractor.
- Do not operate with bystanders in mowing area.
- Do not operate with deflectors/guards removed.
- Do not place hands or feet under deck when operating or when engine is running.

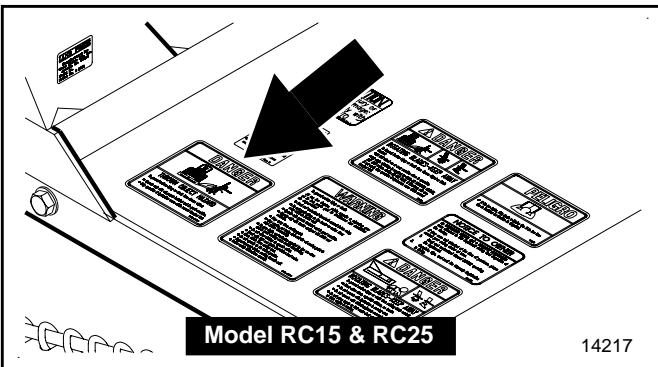
818-555C

818-555C
Danger Rotating Blade

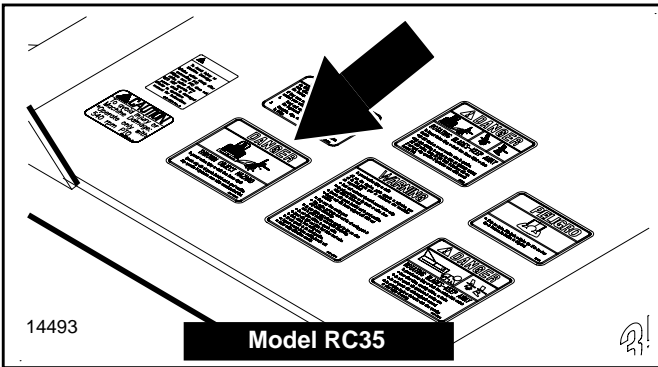
Important Safety Information



818-555C
Danger Rotating Blade

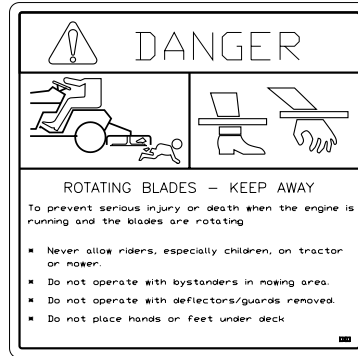
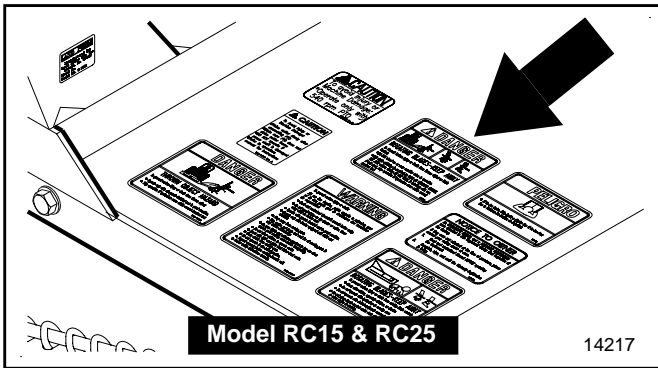


818-556C
Thrown Object Hazard

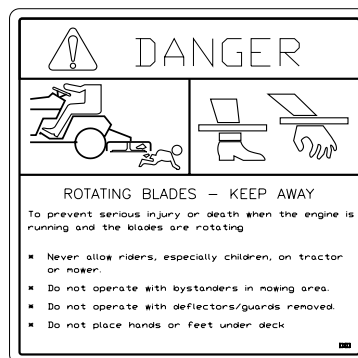
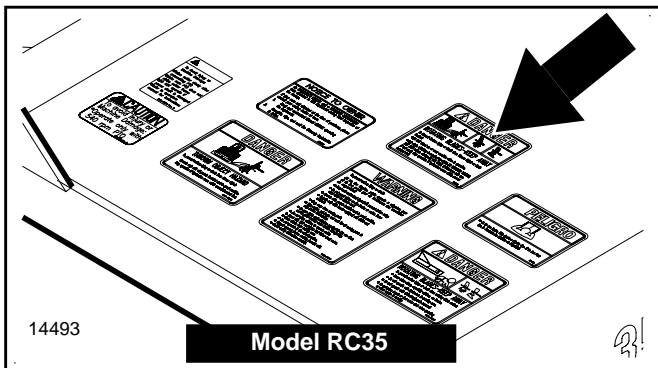


818-556C
Thrown Object Hazard

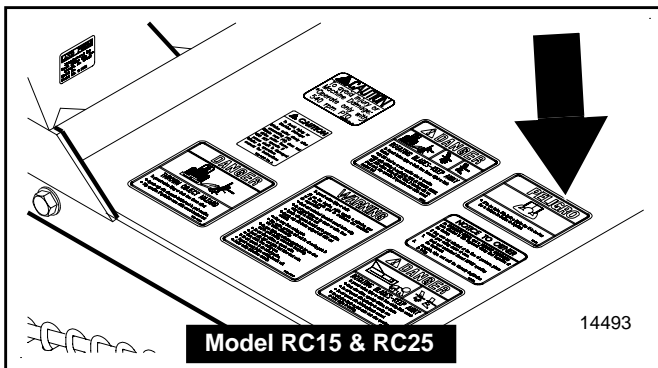
Important Safety Information



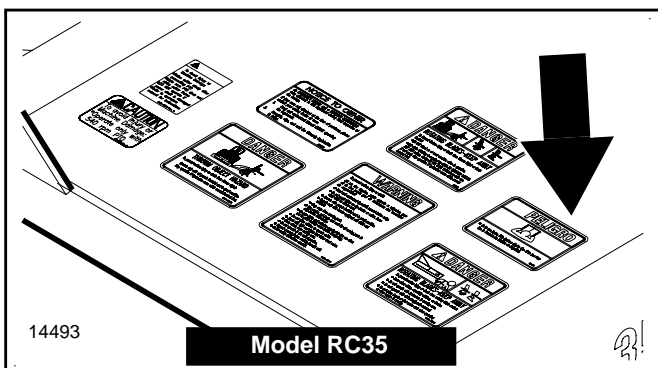
818-564C
Danger Chain Guard



818-564C
Danger Chain Guard



818-557C
Peligro



818-557C
Peligro

Introduction

Land Pride welcomes you to the growing family of new product owners. This implement has been designed with care and built by skilled workers using quality materials. Proper assembly, maintenance, and safe operating practices will help you get years of satisfactory use from the machine.

Using This Manual

This Operator's Section is designed to help familiarize you with safety, assembly, operation, adjustments, troubleshooting, and maintenance. Read this manual and follow the recommendations to help ensure safe and efficient operation.

The warranty sheet should be filled out by the owner and dealer at the time of purchase. After completion give the dealer the white copy and send the pink copy to Great Plains. Keep your copy in the manual for use when corresponding with the dealer.

To order a new Operator or Parts Manual contact your authorized dealer or write to the address listed below in the *Owner Assistance* paragraph. Include the model and serial numbers of your unit.

The information contained within this manual was current at the time of printing. Some parts may change slightly to assure you of the best performance.

Terminology:

"Right " or "Left" as used in this manual is determined by facing the direction the machine will travel while in use unless otherwise stated.

Definitions:

NOTE: A special point of information related to it's preceding topic. The author's intention is that you read and note this information before continuing.

IMPORTANT: Information, related to it's proceeding topic, that the author feels would be of use.

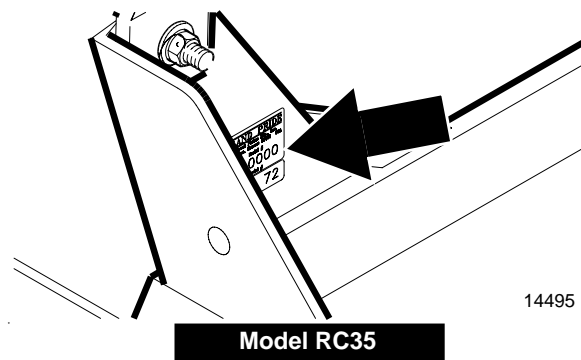
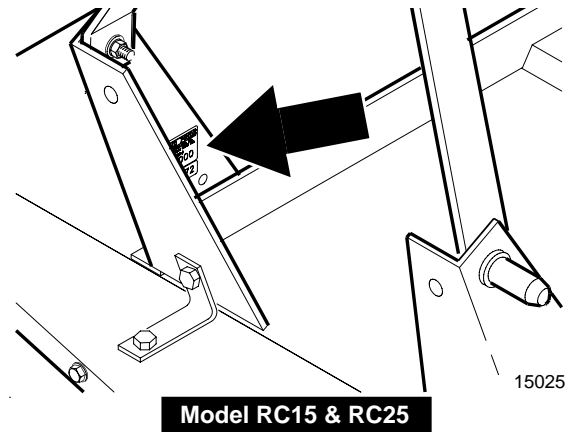
Owner Assistance

If customer service or repair parts are required contact your local Land Pride dealer. He has trained personnel, repair parts, and the equipment needed to service your implement.

These parts have been specially designed and should only be replaced with genuine Land Pride parts.

Serial Number Plate

Refer to the Figure 1 for the location of your serial number plate.



**Serial Number Plate Location
Figure 1**

For prompt service always use the serial number and model number when ordering parts from your Land Pride dealer. Be sure to include your serial and model numbers in correspondence also.

Your dealer wants you to be satisfied with your new machine. If for any reason you do not understand any part of this manual or are not satisfied with the service received, the following actions are suggested:

1. Discuss the matter with your dealership Service Manager make sure he is aware of any problems you may have and that he has had the opportunity to assist you.
2. If you are still not satisfied, seek out the Owner or General Manager of the dealership, explain the problem and request assistance.
3. For further assistance write to:

Product Support

Land Pride, Service Department
1525 East North Street
P.O. Box 5060
Salina, Ks. 67402-5060

Section 1 Assembly and Setup

Tractor Requirements

The RC15, RC25 and RC35 Rotary Cutters are designed for use with tractors that are equipped with a Type 1 (540 RPM; 1 3/8" - 6 spline) rear power take-off (PTO) per ASAE (American Society of Agricultural Engineers) S203.12 APR93.

The tractor must also provide for 3-point hitch attachments that fall within the scope set forth by ASAE S217.11.

RC15: Category I with tractors' rated PTO horsepower no less than 15 nor more than 50; **RC25:** Category I standard or II with tractors' rated PTO horsepower no less than 20 nor more than 75; **RC35:** Category II with tractors' rated PTO horsepower no less than 30 nor more than 120

NOTE: In order to maintain steering control, ballast may need to be added to your tractor. To determine whether or not to add the ballast, refer to your tractor's operator manual.

CAUTION!

Do not overspeed PTO or machine damage may result. This cutter is designed to be used with a tractor using a 540 RPM rear PTO.

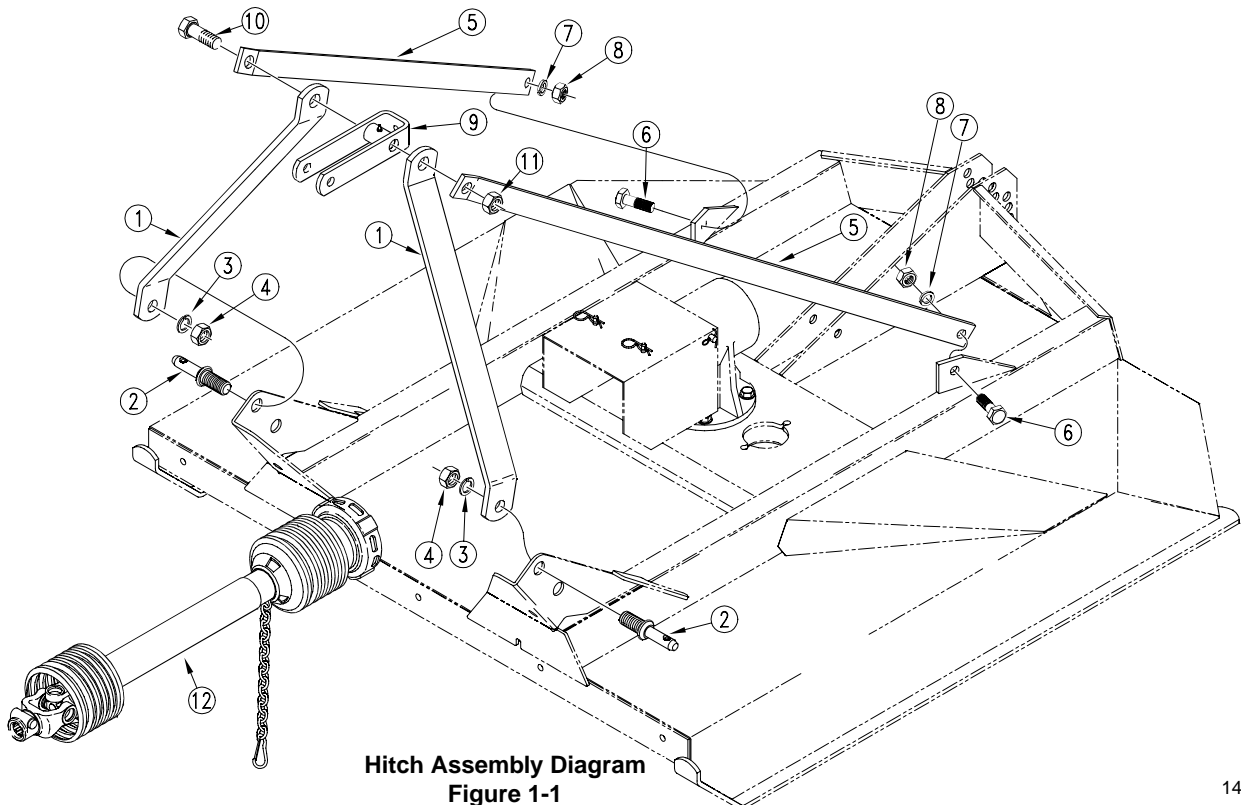
Hitch Assembly

Refer to Figure 1-1:

NOTE: There are two mounting holes in each lower hitch angle. The top hole is for standard category hitch tractors; the lower hole is for smaller horsepower rated tractors without adequate ground clearance when cutter is raised for transport.

NOTE: Do not tighten hardware until assembly is complete.

1. Assemble hitch straps (#1) to inside of lower hitch angles welded to cutter deck with hitch pin (#2), lock washers (#3), and nuts (#4).
2. Attach hitch braces (#5) to inside of lugs welded to deck using 3/4" bolt (#6), lock washer (#7), and nut (#8).
3. Install pivoting upper hitch (#9) to inside of hitch straps (#1) with hitch braces (#5) on the outside. Install 1" bolt (#10) and nut (#11). Do not overtighten as upper must be allowed to pivot.
4. Tighten all hardware to torque listed in the *Torque Values Chart* in the "Appendix" section on page 26.



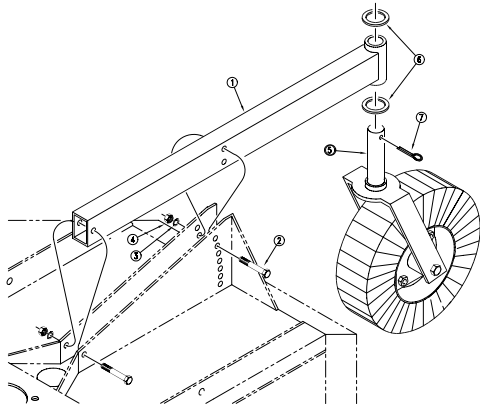
Hitch Assembly Diagram
Figure 1-1

14244

Section 1 Assembly and Setup

RC15 Tailwheel

As shown in Figure 1-3, attach tailwheel boom (#1) in tailwheel risers welded to cutter deck using 1/2" x 3 1/4" long bolts (#2), lock washers (#3), and nuts (#4). Attach tailwheel yoke spindle (#5) to boom weldment (#1) and secure with washers (#6) and cotter pin (#7).

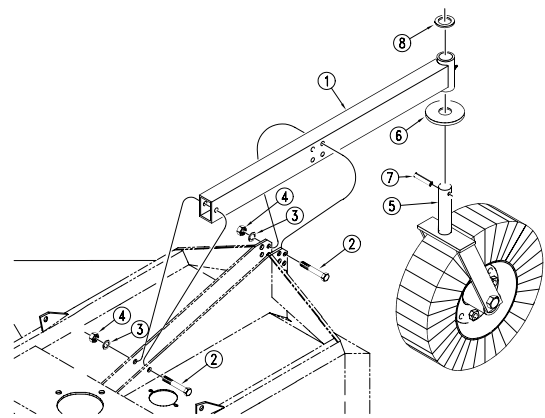


14221

RC15 Tailwheel Assembly
Figure 1-3

RC25 & RC35 Tailwheel

As shown in Figure 1-3, attach tailwheel boom (#1) in tailwheel risers welded to cutter deck using 3/4" -10 x 4 1/2" long bolts (#2), lock washers (#3), and nuts (#4). Attach tailwheel yoke spindle (#5) to boom weldment (#1) and secure with washers (#6 & #8) and roll pin (#7).



14245

RC25 & RC35 Tailwheel Assembly
Figure 1-3

Driveline Installation

1. Grease input shaft on gearbox.
2. Slide the driveline end with the slip clutch or shearbolt over splined shaft of the gearbox and secure with locking device on driveline.

3-Point Tractor Hookup

! DANGER!

Tractor hook-up can be hazardous to your health or that of your helper. Do not allow anyone to stand between the cutter and the tractor during hook-up operations. Do not operate the hydraulic 3-point lift controls while someone is directly behind the tractor.

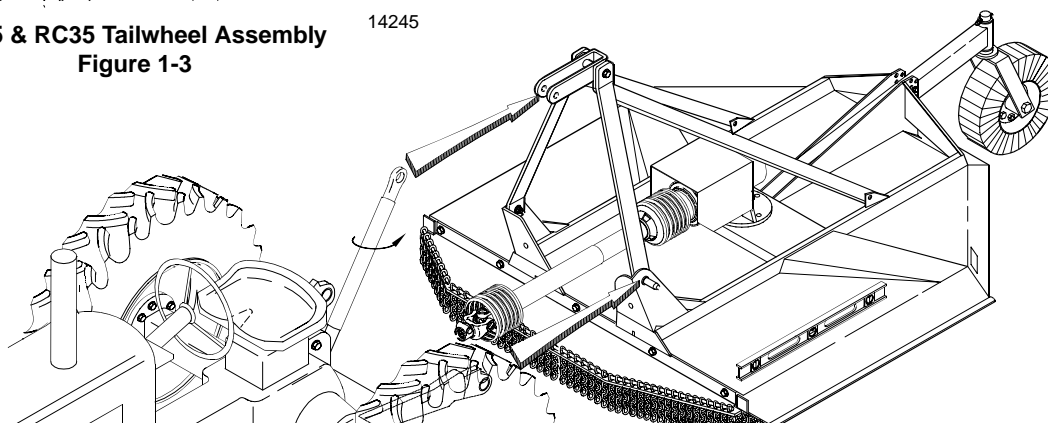
Refer to Figure 1-5:

1. Locate the cutter on a flat, level surface.
2. Determine the hitch category of the tractor that will be used:
A Category I tractor will have a lower hitch link hole diameter of 7/8". The top link hole diameter (implement end) will be 3/4".
A Category II tractor will have a lower hitch link hole diameter of 1 1/8". The top link hole diameter (implement end) will be 1".
3. Slowly back the tractor up to the cutter and use the tractors 3-point hydraulic control to adjust the lower link arms up or down to match the height of the cutter hitch pins.

! DANGER!

Engage parking brake, shut off tractor and remove key before dismantling from the tractor.

4. If the tractor is a Category I, simply position the lower link arms to "insert" the hitch pin into the lower hitch link hole. If the tractor is Category II, install the adaptor bushing on the hitch pin before insertion into the lower link hole. (Adapter bushing not required on RC2584 and all RC35 series rotary cutters.)



14249

Tractor 3-Point Hitch
Figure 1-4

Section 1 Assembly and Setup

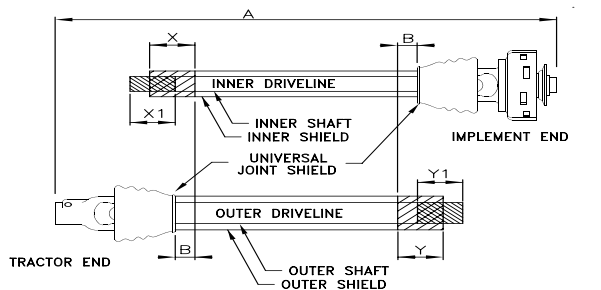
5. Install a 7/16" lynch pin or other fastener (supplied by customer) thru the hitch pin hole to lock the lower links into position.
6. Connect the driveline to the tractor's PTO output shaft and secure with locking device on driveline. Connect the safety chain to the hitch brace on the cutter to restrict outer shield of driveline from rotating.

NOTE: Chain should be attached at implement end of driveline.

7. Connect the top link to the upper pivot hitch using the 3/4" hitch pin supplied.
8. Start the tractor and slowly engage the tractors hydraulic 3-point to lift the cutter. Check for sufficient drawbar clearance. Move the drawbar ahead, aside, or remove if required. Watch the telescoping movement of the driveline to ensure that it does not bottom out while lifting the 3-point. If the driveline does bottom out, it will require shortening:

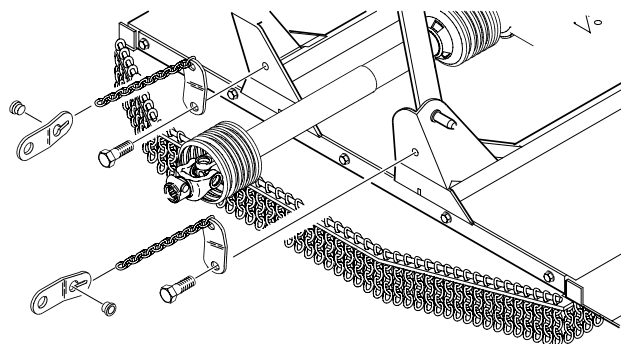
Refer to Figure 1-5:

- a. Hold the half shafts next to each other in the shortest working position and mark them.
- b. Shorten the inner and outer guard tubes equally.
- c. Shorten the inner and outer profiles by the same length as the guard tubes.
- d. Proper overlap is a minimum of one-half the length of each tube, with both tubes being of equal length.
- e. Round off all sharp edges and remove burrs. grease sliding profiles before re-assembly.



Cutting the PTO Shafts
Figure 1-5

13588



14247

Check Chain Installation
Figure 1-6

9. If check chain kit is added. install as shown in Figure 1-6.

Safety Guards

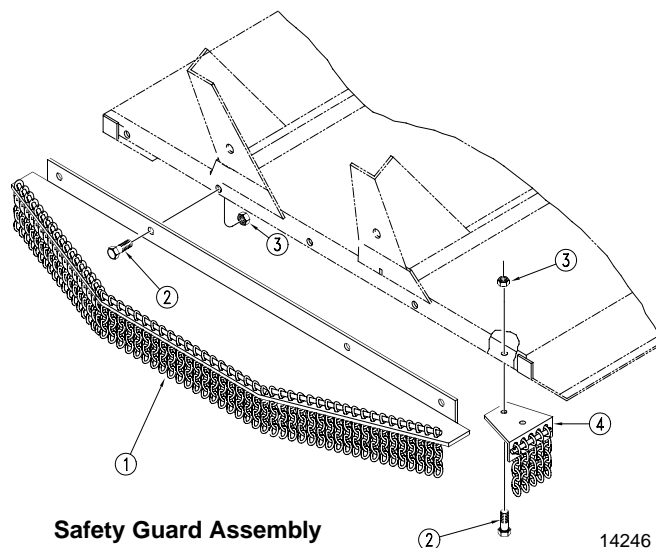
Refer to Figure 1-7:

After Rotary Cutter assembly is complete, tighten all hardware to the torque listed on *Torque Values Chart* in the "Appendix" section on page 26.

1. Install chain guard assembly (#1) to the cutter front angle using 1/2" -13 x 1 1/2" long bolts (#2) and whiz nuts (#3).
2. Install side chain guards (#4) to the bottom of cutter front angle using bolts (#2) and whiz nuts (#3).

! DANGER!

Rotary cutters have the ability to discharge objects at high speeds; therefore, the use of front safety shields is strongly recommended when cutting along highways or in an area where people may be present.



Safety Guard Assembly
Figure 1-7

14246

Section 2 Operating Instructions

Transporting

 **CAUTION!**

When traveling on public roads at night or during the day, use accessory lights and devices for adequate warning to operator's of other vehicles. Comply with all federal, state and local laws.

NOTE: Always disengage the tractor's PTO before raising the cutter to transport position.

1. When raising the cutter to the transport position be sure that driveline does not contact tractor or cutter.
2. Be sure to reduce tractor ground speed when turning; and, leave enough clearance so the cutter does not contact obstacles such as buildings, trees or fences.
3. Select a safe ground speed when transporting from one area to another. When traveling on roadways, transport in such a way that faster moving vehicles may pass you safely.
4. When traveling over rough or hilly terrain, shift tractor to a lower gear.

Operating Check List

In addition to design and configuration of equipment; hazard control and accident prevention are dependent upon the awareness, concern, prudence and proper training involved in their operation, transport, maintenance and storage of equipment. Before beginning to cut the following inspection should be performed.

Operating Checklist

Check	Reference
<input type="checkbox"/> "Safety Rules" in this Manual.	page 1
<input type="checkbox"/> Check oil level in gearboxes. Refer to "Maintenance & Lubrication".	Section 5 page 22
<input type="checkbox"/> Check that all plugs in gearbox have been replaced properly.	Section 5 page 22
<input type="checkbox"/> Be sure nuts and bolts are tight.	Section 1
<input type="checkbox"/> Be certain all guards and shields are in place.	Section 1
<input type="checkbox"/> Lubricate the cutter as needed. Refer to "Maintenance & Lubrication".	Section 5 page 17

 **CAUTION!**

To prevent personal injury caused by thrown objects, the use of front & rear safety guards is strongly recommended! To avoid injury or death from entanglement in rotating drivelines, the drive gearbox shields must be in place and secure when operating.

 **DANGER!**

Rotary cutters have the ability to discharge objects at high speeds; therefore, the use of front safety shields is strongly recommended when cutting along highways or in an area where people may be present.

Cutting Instructions

1. Your cutter is equipped with free swinging cutting blades to reduce shock loads to the cutter if striking obstacles.
2. Start the machine slowly; do not use full throttle. Allow 10 seconds for cutter blades to become aligned properly before going to full power.
3. The ground speed depends on two things; the density of the material to be cut, and the size of the tractor. Never run fast enough to overload the tractor.
4. It is important to maintain 540 RPM PTO speed. Loss of PTO speed will allow the blades to hinge back and result in ragged, uneven cutting.
5. This cutter was designed to cut grass and light brush in right-of-ways, pastures and for shredding row crop residues.

 **CAUTION!**

Damage may occur if exceeding the cutting capacity of the cutter!

 **CAUTION!**

Do not over speed PTO or machine damage may result. This cutter is designed to be used only with a tractor having a 540 RPM rear PTO.

Section 3 Adjustments

Cutting Height

There are 4 primary adjustments that should be made prior to actual field operations:

- a. Deck level from left to right
- b. Tractor top link length
- c. Tractor lower link height
- d. Tailwheel height

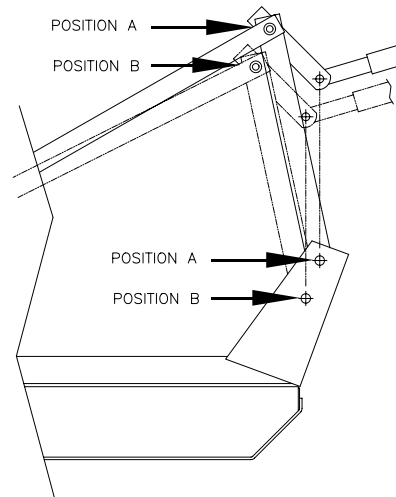
Proper adjustment of each of these items will provide for higher efficiency, improved cutting performance and longer blade life. The following tools will be needed:

- a. Pliable tape measure
- b. Spirit or carpenters level
- c. Open end or hex end wrench or socket set
- d. Protective gloves

Having completed *3-Point Tractor Hookup* in the **“Assembly and Setup”** section on page 10 locate the tractor on a flat level surface.

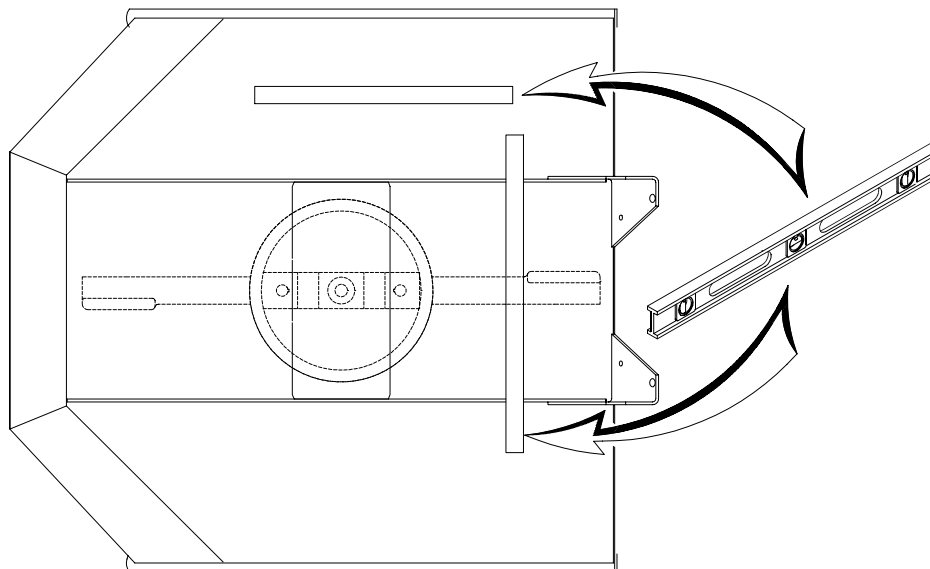
- 1. Use the tractor’s hydraulic 3-point control to lower the cutter until the tailwheel contacts ground surface.
- 2. Place a spirit level or other suitable leveling device on the front of the cutter deck as shown in Figure 3-1. Adjust either one or both of the tractors lower link height adjustments to level the deck from left to right. Some tractors have only a single adjusting crank.

- 3. Similarly, place a level on either of the main deck channels. Use the tractor’s 3-point hydraulic control to level the cutter deck from front to rear.
- 4. With cutter in cutting position, adjust tractor top link until upper hitch pin is aligned vertically with lower hitch pins, see Figure 3-2. Position “A” is for standard category hitch tractors and position “B” is for smaller horsepower rated tractors without adequate ground clearance when cutter is raised for transport.



10419

**Top Link Adjustment
Figure 3-2**



14240

**Deck Leveling
Figure 3-1**

Section 3 Adjustments

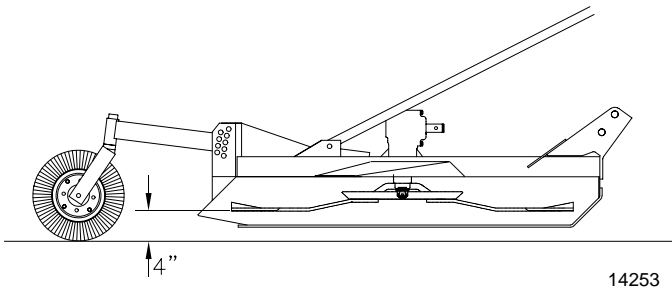
! DANGER!

Engage parking brake, disengage PTO, shut off tractor and remove key before proceeding. Ensure that all moving parts have come to a complete stop before dismounting from the tractor.

! CAUTION!

Wear a pair of gloves when performing this operation. Go to the back of the cutter and carefully rotate each blade to the position shown in Figure 3-1. Avoid direct contact with the cutting edge of the blade.

5. Measure the distance from the end (cutting tip) of the blade to the ground surface. This distance is the nominal cutting height, see Figure 3-3.



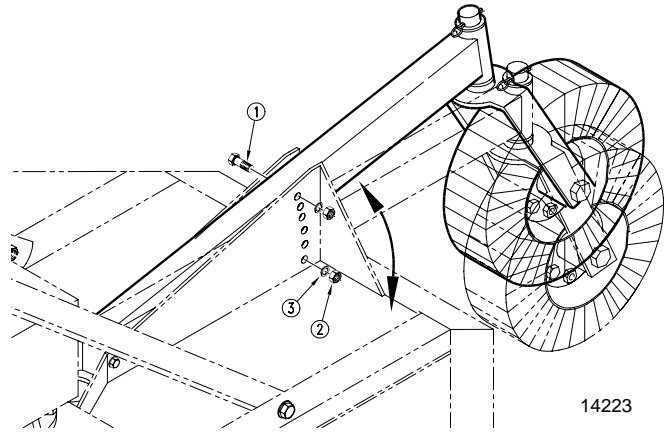
Nominal Cutting Height
Figure 3-3

14253

Refer to Figure 3-4:

6. If the cutting height is too high or too low, the tailwheel must be adjusted as follows:
 - a. Use the tractor's 3-point hydraulic control to lift the cutter such that the tailwheel clears the ground surface.
 - b. Remove attaching hardware; bolt (#1), nut (#2), and lock washer (#3).

- c. Adjust the tailwheel up or down to the desired cutting height and replace the attaching hardware.
- d. Lower the 3-point hitch and repeat steps 3 and 4 to be sure the deck is level and the top link is adjusted properly.



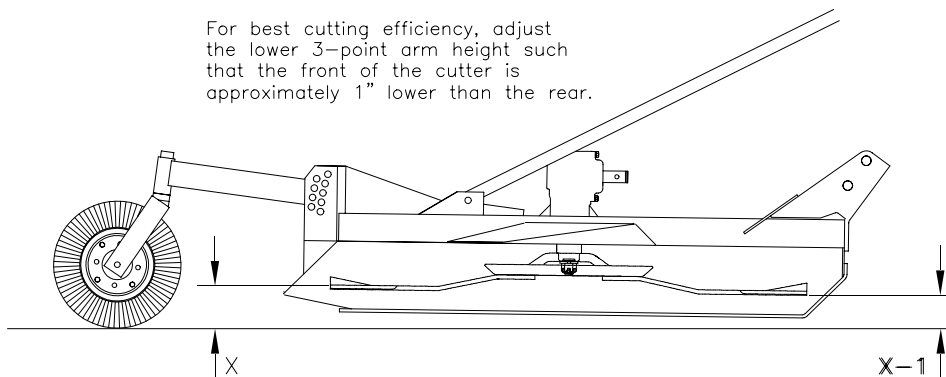
Height Adjustment
Figure 3-4

14223

7. Re-adjust the tractor's 3-point hydraulic control such that the front of the cutter is 1" lower than the rear.

NOTE: This adjustment is very important. With the deck positioned at this attitude, the blades will be cutting material only at the front of the cutter. If the deck is level, or the rear of the cutter is lower than the front, the blades are subject to continuous material flow which results in additional blade wear and horsepower loss as well as more frequent blade sharpening. Refer to Figure 3-5.

For best cutting efficiency, adjust the lower 3-point arm height such that the front of the cutter is approximately 1" lower than the rear.



14254

Best Deck Attitude for Cutting
Figure 3-5

Section 4 Troubleshooting

Problem	Cause	Solution
Oil seal leaking	Gearbox overfilled	Drain to side plug hole.
	Seals damaged	Replace seals
	Grass or wire wrapped on shaft in seal area	check seal areas daily
Driveline yoke or cross failing	Shock load	Avoid hitting solid objects
	Needs lubrication	Lubricate every 8 hours.
Driveline clutch slipping or Shear bolt breaking	Scalping the ground	Raise cutting height
	Cutting too fast	Reduce travel speed
	PTO being engaged too fast at high engine rpm	Slowly engage PTO at low engine rpm
	Cutting over solid objects	Avoid solid objects
Bent Driveline (NOTE: driveline should be repaired or replaced if bent)	Contacting frame	Reduce lift height in transport position
	Contacting drawbar	Reposition drawbar
	Bottoming out	Shorten driveline
Driveline telescoping tube failing	Shock load	Avoid hitting solid objects
Driveline telescoping tube wearing	Needs lubrication	Lubricate every 50 hours
Blades wearing excessively	Cutting on sandy ground	Raise cutting height
	Contacting ground frequently	Raise cutting height
Blades Breaking	Hitting solid objects	Avoid solid objects
	Blades hitting each other	Blade carrier needs to be timed
Blades coming loose	Blades not tightened properly	Tighten blade hardware (refer to "Servicing Cutter Blades" on page 16.
Blade carrier becomes loose	Running loose in the past	Replace gearbox output shaft and blade carrier
	Blade carrier hardware not tight enough	Tighten to specified torque
Blade bolt holes worn	Blade hardware running loose	Replace blades and blade bolts if worn
Blade carrier bent	Hitting solid objects	Avoid hitting solid objects and replace blade carrier
Excessive side skid wear	Cutting height not level	Adjust cutter height
	Soil abrasive	Adjust cutter height
	Cutting too low	Adjust cutter height
Tail wheel support failing	Lowering too fast	Adjust rate of drop
	Hitting objects when turning	Reduce speed on turns

Section 4 Troubleshooting

Problem	Cause	Solution
Excessive vibration	Blades locked together	Unlock blades
	Driveline bent	Replace driveline
	Blades loose	Tighten blade bolts
	Blade carrier bent	Replace blade carrier
	Blade broken	Replace blade
	Blade will not swing	Remove and inspect blade
	Blades have unequal weight	Replace both blades

Section 5 Maintenance and Lubrication

Maintenance

Proper servicing and adjustment is the key to the long life of any farm implement. With careful and systematic inspection, you can avoid costly maintenance, time and repair.

After using your cutter for several hours, check all bolts to be sure they are tight.

Replace any worn, damaged or illegible safety decals by obtaining new decals from your Land Pride Dealer.

Service Cutting Blades

- Both blades should be sharpened at the same angle as the original cutting edge and must be replaced or reground at the same time to maintain proper balance in the cutting unit.

NOTE: Care should be taken in order not to remove any more material than necessary when sharpening blades.

- Both blades should weigh the same after sharpening.
- When replacing or sharpening the cutter blades, examine bolts for excessive wear and replace if necessary. To replace blades:
 - Order blade bolt Land Pride part # 802-277C.
 - Blade shim (#30), must be installed to insure a tight and proper fit between the blade bolt and blade. Too tight a fit may cause blade to not swing back into proper cutting position after striking obstacles. Too loose a fit will cause play between blade bolt and blade resulting in excessive wear on blade carrier, blade bolts and blades. Three sizes of shims are available: 16 ga., part no. 312-075D; 18 ga., part no. 312-082D; & 20 ga., part no. 312-089D.
 - Torque blade bolt lock nut to 450 ft. pounds. Use a 3' long pipe to achieve proper torque.
- If replacing dishpan, nut on gearbox output shaft should be torqued to 450 foot/pounds and cotter pin installed in nut with legs securely bent around nut.

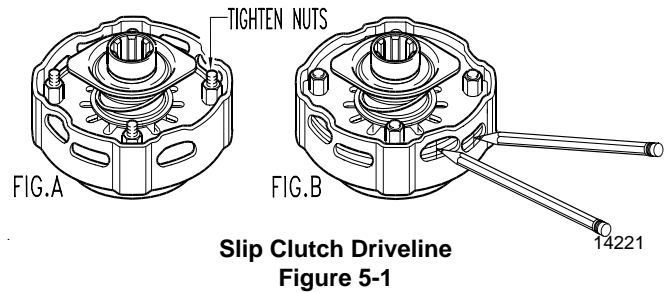
Shearbolt Driveline

Cutter drive components are protected from shock loads by a 1/2" shear bolt. If shear bolt fails, replace with a 1/2" x 3 1/2" long hex bolt, grade 2. Shear bolt failure can be avoided by engaging the PTO slowly at low engine rpm.

Walterscheid Slip Clutch Run-In

Refer to Figure 5-1:

RC15 and RC25 Rotary Cutters drive components are protected from shock loads by a two plate slip clutch and the RC35 Rotary Cutters are protected by a four plate slip clutch. The clutch should slip during operation to protect the cutter from excessive loads.



Slip Clutch Driveline
Figure 5-1

Prior to initial operation and after long periods of inactivity, the Friction Clutch should be "run-in".

- Tighten all 4 nuts uniformly until the spring load is low enough that the clutch slips freely with the PTO engaged.
- Turn nuts fully back. Clutch is ready for use.



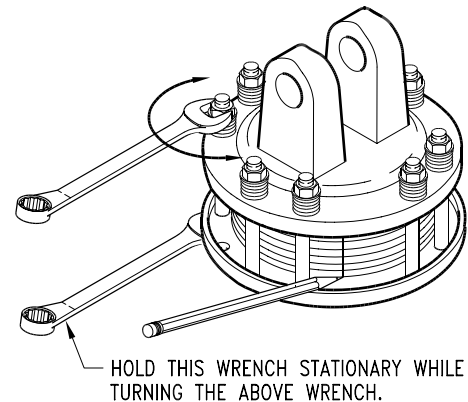
CAUTION!

Engage parking brake, disengage PTO, shut off tractor, and remove key before making any of the following adjustments.

Eurocardan Clutch Run-In

Refer to Figure 5-2:

- Using a pencil or other marker, scribe a line across the exposed edges of the clutch plates and friction disks.



13693

Clutch
Figure 5-2

- Carefully loosen each of the 8 spring retainer nuts on the clutch housing a total of EXACTLY 2 revolutions. It will be necessary to hold the hex end of the retainer bolt in order to count the exact number of revolutions.
- Start the tractor and engage the PTO drive for 2-3 seconds to permit slippage of the clutch surfaces. Disengage the PTO, then re-engage a second time for 2-3 seconds. Disengage the PTO, shut off tractor and remove key. Wait for all components to stop before dismounting from tractor.

Section 5 Maintenance and Lubrication

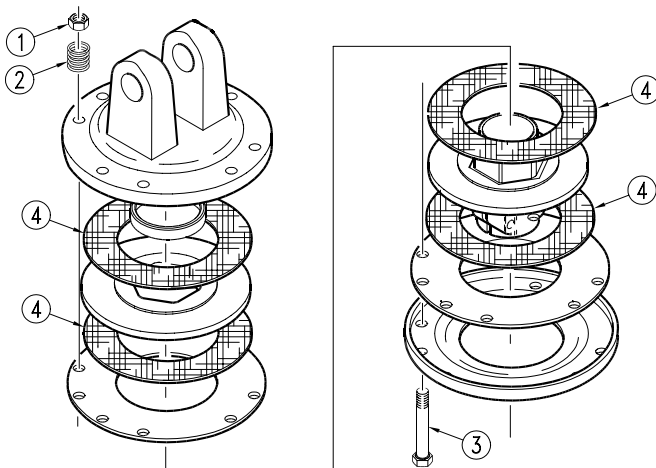
4. Inspect the clutch and ensure that the scribed markings made on the clutch plates have changed position. If any two marks on a friction disk and plate are still aligned, such indicates that slippage has not occurred and the clutch must be disassembled to separate the friction disks, see "**Clutch Assembly and Disassembly**", on page 18.
5. Tighten each of the 8 spring retainer nuts on the clutch housing EXACTLY 2 revolutions to restore the original clutch setting pressure.
6. The clutch should be checked during the first hour of cutting and periodically each week. An additional set of scribe marks can be added to check for slippage. See "**Clutch Assembly and Disassembly**", on page 18, to adjust for proper spring length.

Eurocardan Clutch Assembly & Disassembly

If the clutch run-in procedure, see "**Clutch Run-In**" on page 17, indicated that one or more of the friction disks did not slip, the clutch must be disassembled to separate the friction discs. Refer to the Parts Section of this manual for a detailed parts breakdown.

Refer to Figure 5-3:

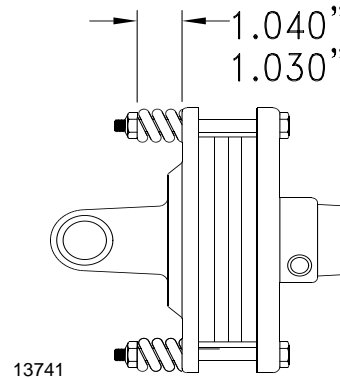
Disassembly of the clutch is simply a matter of first removing the spring retainer nuts (#1), springs (#2) and bolts (#3) from the assembly. Each friction disc (#4) must then be separated from the metal surface adjacent to it. Inspect all parts for excessive wear and condition. Clean all parts that do not require replacement.



14714
**Clutch Disassembly
Figure 5-3**

The original friction disc thickness is 1/8" (3.2mm) and should be replaced if the thickness falls below 3/64" (1.1mm). If the clutches have been slipped to the point of "smoking", the friction discs may be damaged and should be replaced. Heat build-up may also affect the yoke joints.

Install new friction discs if needed and reassemble all components in proper order. Progressively tighten each spring retainer bolt until the spring length is 1.010 inches, Figure 5-4.



**Clutch Adjustment
Figure 5-4**

Storage

At the end of the working season or when the cutter will not be used for a long period, it is good practice to clean off any dirt or grease that may have accumulated on the cutter and any of the moving parts.

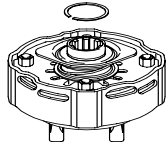
1. Clean the cutter as necessary.
2. Check the blades for wear and replace if necessary.
3. Inspect the cutter for loose, damaged or worn parts and adjust or replace as needed.
4. Lubricate as noted in *Lubrication*, starting on page 21.
5. Store the cutter inside if possible for longer cutter life.
6. Repaint parts where paint is worn or scratched to prevent rust. Ask your dealer for Aerosol Land Pride Beige touch-up paint #821-011C.

Section 5 Maintenance and Lubrication

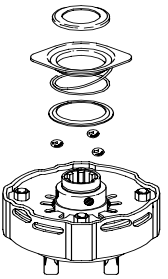
4-Plate Slip Clutch

NOTE: Before proceeding, secure the clutch firmly in a vise or other clamping device to prevent injury.

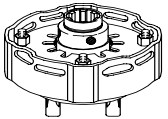
Disassembly



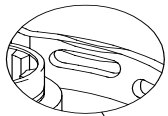
◀ Step 1
Remove snap ring.



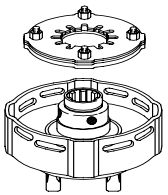
◀ Step 2
Remove backup ring, lock collar, compression spring, bottom backup ring, and balls.



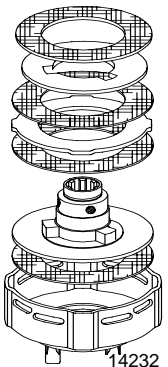
◀ Step 3
Tighten the four hex nuts uniformly until the clutch pack and hub are loose.



◀ Step 4
Bend all four retaining lugs out on the edge of the clutch housing.



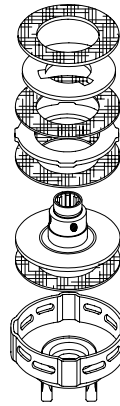
◀ Step 5
Remove the thrust plate with the Belleville Springs and lug rings to access friction disks and hub for inspection or service.



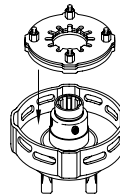
◀ Step 6
Inspect friction disks and hub.

14232

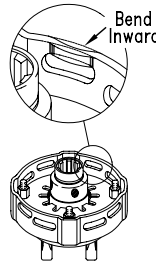
Assembly



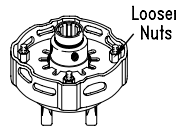
◀ Step 1
Place the hub and friction disks into the housing.



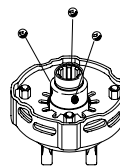
◀ Step 2
Compress the Belleville Springs to the pressure plate by tightening the four hex nuts and then placing the assembly into the clutch housing.



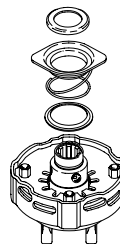
◀ Step 3
Bend the retaining lugs inward over the Belleville Spring edges to secure the spring before backing the four hex nuts off.



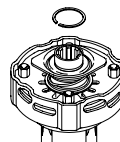
◀ Step 4
With the lugs bent in, loosen the four hex nuts completely to the end of the threaded studs.



◀ Step 5
Insert greased balls.



◀ Step 6
Install bottom backup ring, compression spring, lock collar, and top backup ring.



◀ Step 7
Install snap ring.

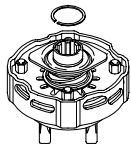
15250

Section 5 Maintenance and Lubrication

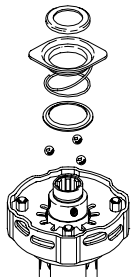
2-Plate Slip Clutch

NOTE: Before proceeding, secure the clutch firmly in a vise or other clamping device to prevent injury.

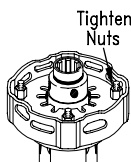
Disassembly



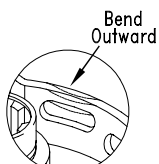
◀ **Step 1**
Remove snap ring.



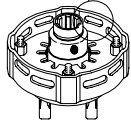
◀ **Step 2**
Remove backup ring, lock collar, compression spring, bottom backup ring, and balls.



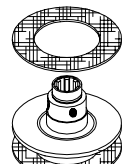
◀ **Step 3**
Tighten the four hex nuts uniformly until the clutch pack and hub are loose.



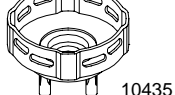
◀ **Step 4**
Bend all four retaining lugs out on the edge of the clutch housing.



◀ **Step 5**
Remove the thrust plate with the Belleville Springs and lug rings to access friction disks and hub for inspection or service.

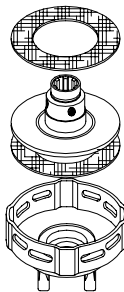


◀ **Step 6**
Inspect friction disks and hub.

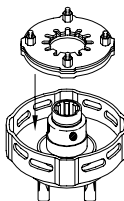


10435

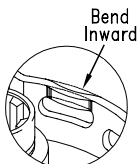
Assembly



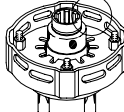
◀ **Step 1**
Place the hub and friction disks into the housing.



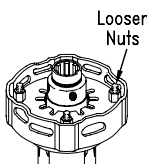
◀ **Step 2**
Compress the Belleville Springs to the pressure plate by tightening the four hex nuts and then placing the assembly into the clutch housing.



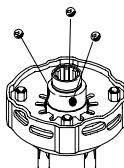
◀ **Step 3**
Bend the retaining lugs inward over the Belleville Spring edges to secure the spring before backing the four hex nuts off.



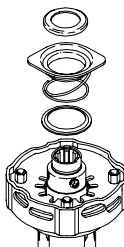
◀ **Step 4**
With the lugs bent in, loosen the four hex nuts completely to the end of the threaded studs.



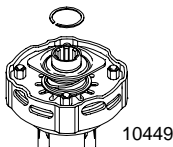
◀ **Step 5**
Insert greased balls.



◀ **Step 6**
Install bottom backup ring, compression spring, lock collar, and top backup ring.







◀ **Step 7**
Install snap ring.

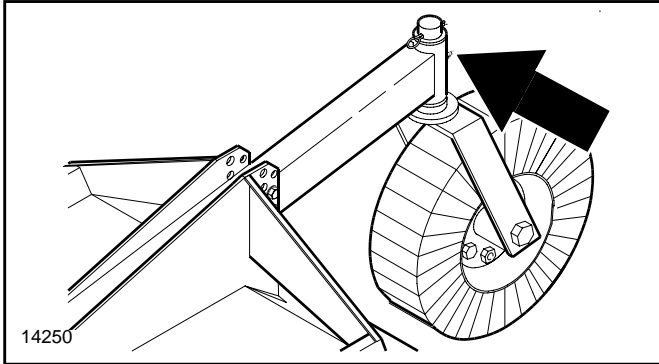




10449

Section 5 Maintenance and Lubrication

Lubrication

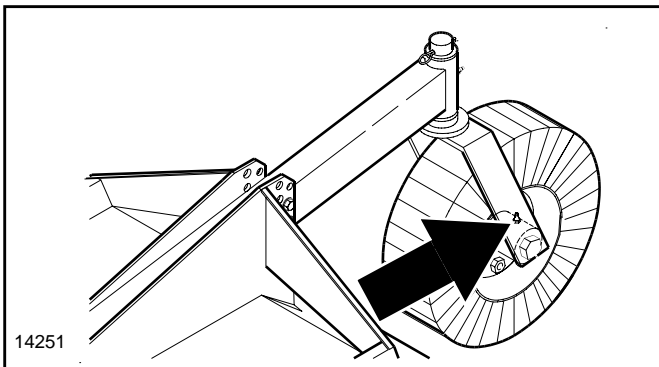
Lubrication Legend	 Multipurpose spray lube	 Multipurpose grease lube	 Multipurpose oil lube	 Intervals at which lubrication is required





	
---	---

Tailwheel Spindle Hub

Type of Lubrication: Multipurpose Grease
Quantity = 6 pumps

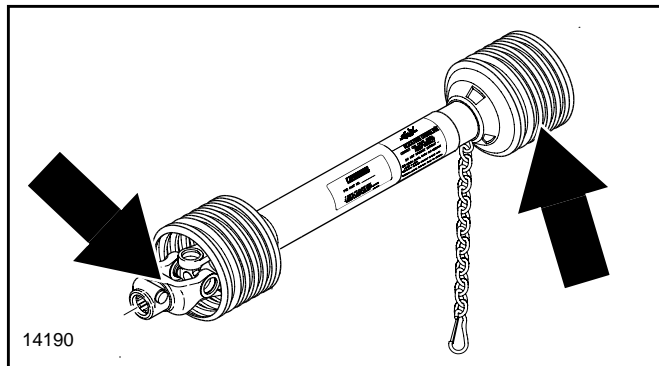




	
---	---

Tailwheel hub

The tailwheel hub is equipped with a relief hole located directly opposite the grease fitting. The relief hole releases pressure from inside the hub casting when it is greased. The hub should be greased until grease purges from the relief hole.

Type of Lubrication: Multipurpose Grease
Quantity = Until grease purges from the relief hole

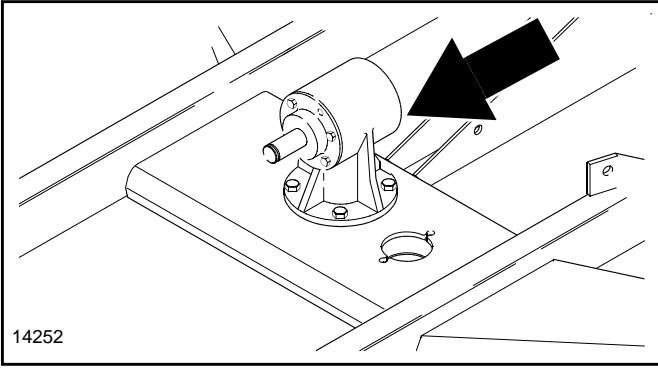


	
---	---

Driveline U-Joints

Type of Lubrication: Multipurpose Grease
Quantity = 6 pumps

Section 5 Maintenance and Lubrication



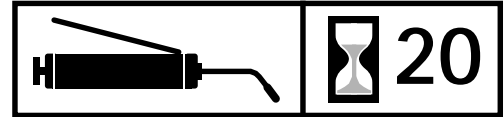
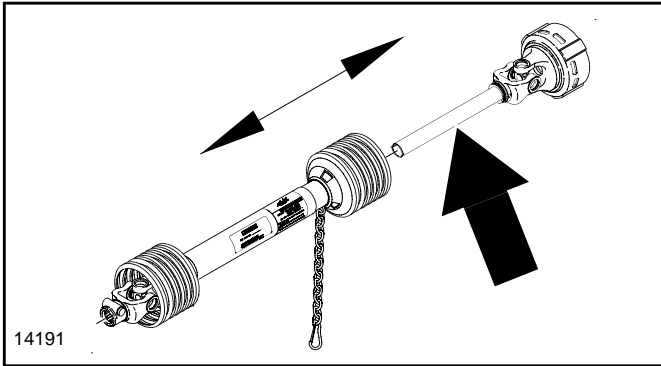
Gearbox

Check oil level in the gearbox by removing the side plug in the gearbox case. If the oil level is low, remove the top plug in the gearbox case and fill with EP90 oil until oil flows from the side port of gearbox case. Reinstall plugs and tighten.

NOTE: Do not overfill! Cutter should be level when checking oil.

Type of Lubrication: EP90 Oil

Quantity = fill until oil flows from the side port of gearbox case.



Driveline

Disconnect driveline from the tractor and slide apart

Quantity = Clean & coat the inner tube of the driveline with a light film of grease and then reassemble

Section 6 Specifications and Capacities

RC15 Series Rotary Cutter			
	RC1548	RC1560	RC1572
Cutting Width	45 1/2"	57"	69"
Overall Width	50"	62"	74"
Overall Length (Including Tailwheel)	84"	96"	108"
Blade Tip Speed	13,096 fpm / 1,042 rpm	12,469 fpm / 794 rpm	14,955 fpm / 794 rpm
Gearbox	540 RPM PTO Driven Gear- box 1.93:1 Speed-Up Bev- eled Gears Cast Iron Housing	540 RPM PTO Driven Gear- box 1.47:1 Speed-Up Bev- eled Gears Cast Iron Housing	540 RPM PTO Driven Gear- box 1.47:1 Speed-Up Bev- eled Gears Cast Iron Housing
Machine Weight (with Chain Guards)	420#	489#	641#
Recommended Tractor PTO HP	15-50	20-50	25-50
Cutting Height	1" - 9"	1" - 9"	1" - 9"
Hitch	Category I	Category I	Category I
Deck Material Thickness	12 Gauge	12 Gauge	10 Gauge
Deck Height	7 1/2"	7 1/2"	7 1/2"
Blades (2)	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades
Blade Holders	Round Pan 3/16" x 21 1/2"	Round Pan 3/16" x 21 1/2"	Round Pan 3/16" x 21 1/2"
Drive Shaft	ASAE Category 3	ASAE Category 3	ASAE Category 3
Slip Protection	Standard - 1/2" Center Shear Bolt Protection Optional - Center Bolt 2 Plate Slip Clutch	Standard - 1/2" Center Shear Bolt Protection Optional - Center Bolt 2 Plate Slip Clutch	Standard - 1/2" Center Shear Bolt Protection Optional - Center Bolt 2 Plate Slip Clutch
Tailwheel	4.00 x 8 x 15 Laminated Tire or 16" Solid Rubber Tire	4.00 x 8 x 15 Laminated Tire or 16" Solid Rubber Tire	4.00 x 8 x 15 Laminated Tire or 16" Solid Rubber Tire

Section 6 Specifications and Capacities







RC25 Series Rotary Cutter			
Model	RC2560	RC2572/RCO2572	RC2584/RCO2584
Cutting Width	60"	72"	84"
Overall Width	63"	75"	87"
Overall Length (Including Tailwheel)	107"	119"	131"
Offset Distance	-	18" {RCO2572 Only}	18" {RCO2584 Only}
Blade Tip Speed	12,384 fpm / 788 rpm	14,861 fpm / 788 rpm	14,369 fpm / 653 rpm
Gearbox	540 RPM PTO Driven Gearbox 1.46:1 Speed-Up Beveled Gears Cast Iron Housing	540 RPM PTO Driven Gearbox 1.46:1 Speed-Up Beveled Gears Cast Iron Housing	540 RPM PTO Driven Gearbox 1.21:1 Speed-Up Beveled Gears Cast Iron Housing
Machine Weight (with Chain Guards)	725#	905#	1165#
Recommended Tractor PTO HP	20-75	25-75	30-75
Cutting Height	2" - 11"	2" - 11"	2" - 11"
Hitch	Category II	Category II	Category II
Hitch Pins	Category I (With Bushing to Category II)	Category I (With Bushing to Category II)	Category II
Deck Material Thickness	10 Gauge	10 Gauge	10 Gauge
Deck Height (Bottom of Deck to Bottom of Skid Shoe)	8 1/2"	8 1/2"	8 1/2"
Blades (2)	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades
Blade Holders	Round Pan 3/16" x 21 1/2"	Round Pan 3/16" x 21 1/2"	Round Pan 3/16" x 39"
Drive Shaft	ASAE Category 4	ASAE Category 4	ASAE Category 4
Slip Protection	4 Plate Slip Clutch	4 Plate Slip Clutch	4 Plate Slip Clutch
Tailwheel	4.00 x 8 x 15 Laminated Tire	4.00 x 8 x 15 Laminated Tire	4.00 x 8 x 15 Laminated Tire

Section 6 Specifications and Capacities

RC35 Series Rotary Cutter			
Model	RC3560	RC3572	RC3584
Cutting Width	57 1/2"	69"	81"
Overall Width	63"	75"	87"
Overall Length (Including Tailwheel)	110"	118"	130"
Blade Tip Speed	12,384 fpm / 788 rpm	14,861 fpm / 788 rpm	14,369 fpm / 653 rpm
Gearbox	540 RPM PTO Driven Gearbox 1.46:1 Speed-Up Beveled Gears Cast Iron Housing	540 RPM PTO Driven Gearbox 1.46:1 Speed-Up Beveled Gears Cast Iron Housing	540 RPM PTO Driven Gearbox 1.21:1 Speed-Up Beveled Gears Cast Iron Housing
Machine Weight (with Chain Guards)	1168#	1341#	1514#
Recommended Tractor PTO HP	30-120	30-120	35-120
Cutting Height	2" - 14"	2" - 14"	2" - 14"
Hitch	Category II	Category II	Category II
Deck Material Thickness	3/16"	3/16"	3/16"
Deck Height (Bottom of Deck to Bottom of Skid Shoe)	9 1/2"	9 1/2"	9 1/2"
Blades (2)	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades	1/2" x 3" Heat Treated Alloy Steel Free-Swinging Suction Blades
Blade Holders	Round Pan 3/16" x 39"	Round Pan 3/16" x 39"	Round Pan 3/16" x 39"
Drive Shaft	ASAE Category 4	ASAE Category 4	ASAE Category 4
Slip Protection	4 Plate Slip Clutch	4 Plate Slip Clutch	4 Plate Slip Clutch
Tailwheel	6.00 x 9 x 21 Laminated Tire	6.00 x 9 x 21 Laminated Tire	6.00 x 9 x 21 Laminated Tire

Section 7 Appendix

Torque Values Chart for Common Bolt Sizes

Bolt Size (Inches) in-tpi ¹	Bolt Head Identification						Bolt Size (Metric) mm x pitch ⁴	Bolt Head Identification					
	 Grade 2		 Grade 5		 Grade 8			 Class 5.8		 Class 8.8		 Class 10.9	
	N · m ²	ft-lb ³	N · m	ft-lb	N · m	ft-lb		N · m	ft-lb	N · m	ft-lb	N · m	ft-lb
1/4" - 20	7.4	5.6	11	8	16	12	M 5 X 0.8	4	3	6	5	9	7
1/4" - 28	8.5	6	13	10	18	14	M 6 X 1	7	5	11	8	15	11
5/16" - 18	15	11	24	17	33	25	M 8 X 1.25	17	12	26	19	36	27
5/16" - 24	17	13	26	19	37	27	M 8 X 1	18	13	28	21	39	29
3/8" - 16	27	20	42	31	59	44	M10 X 1.5	33	24	52	39	72	53
3/8" - 24	31	22	47	35	67	49	M10 X 0.75	39	29	61	45	85	62
7/16" - 14	43	32	67	49	95	70	M12 X 1.75	58	42	91	67	125	93
7/16" - 20	49	36	75	55	105	78	M12 X 1.5	60	44	95	70	130	97
1/2" - 13	66	49	105	76	145	105	M12 X 1	90	66	105	77	145	105
1/2" - 20	75	55	115	85	165	120	M14 X 2	92	68	145	105	200	150
9/16" - 12	95	70	150	110	210	155	M14 X 1.5	99	73	155	115	215	160
9/16" - 18	105	79	165	120	235	170	M16 X 2	145	105	225	165	315	230
5/8" - 11	130	97	205	150	285	210	M16 X 1.5	155	115	240	180	335	245
5/8" - 18	150	110	230	170	325	240	M18 X 2.5	195	145	310	230	405	300
3/4" - 10	235	170	360	265	510	375	M18 X 1.5	220	165	350	260	485	355
3/4" - 16	260	190	405	295	570	420	M20 X 2.5	280	205	440	325	610	450
7/8" - 9	225	165	585	430	820	605	M20 X 1.5	310	230	650	480	900	665
7/8" - 14	250	185	640	475	905	670	M24 X 3	480	355	760	560	1050	780
1" - 8	340	250	875	645	1230	910	M24 X 2	525	390	830	610	1150	845
1" - 12	370	275	955	705	1350	995	M30 X 3.5	960	705	1510	1120	2100	1550
1-1/8" - 7	480	355	1080	795	1750	1290	M30 X 2	1060	785	1680	1240	2320	1710
1 1/8" - 12	540	395	1210	890	1960	1440	M36 X 3.5	1730	1270	2650	1950	3660	2700
1 1/4" - 7	680	500	1520	1120	2460	1820	M36 X 2	1880	1380	2960	2190	4100	3220
1 1/4" - 12	750	555	1680	1240	2730	2010							
1 3/8" - 6	890	655	1990	1470	3230	2380							
1 3/8" - 12	1010	745	2270	1670	3680	2710							
1 1/2" - 6	1180	870	2640	1950	4290	3160							
1 1/2" - 12	1330	980	2970	2190	4820	3560							

¹ in-tpi = nominal thread dia .in inches-threads per inch

² N · m = newton-meters

³ ft-lb= foot pounds

⁴ mm x pitch = nominal thread dia. in millimeters x thread pitch

Torque tolerance + 0%, -15% of torquing values. Unless otherwise specified use torque values listed above.



Warranty

Land Pride warrants to the original purchaser that this Land Pride product will be free from defects in material and workmanship for a period of one year, from the date of delivery to the end user, when used as intended and under normal service and conditions for personal use; and 6 months for municipalities, golf courses, sod farms and rental purposes. This Warranty is limited to the replacement of any defective part by Land Pride and the installation by the dealer of any such replacement part, and does not cover common wear items such as blades, belts, tines, etc. Land Pride reserves the right to inspect any equipment or parts which are claimed to have been defective in material or workmanship.

This Warranty does not apply to any part or product which in Land Pride's judgment shall have been misused or damaged by accident or lack of normal maintenance or care, or which has been repaired or altered in a way which adversely affects its performance or reliability, or which has been used for a purpose for which the product is not designed. Misuse also specifically includes failure to properly maintain oil levels, grease points, and driveline shafts.

Claims under this Warranty must be made to the dealer which originally sold the product and all warranty adjustments must be made through such dealer. Land Pride reserves the right to make changes in materials or design of the product at any time without notice.

This Warranty shall not be interpreted to render Land Pride liable for damages of any kind, direct, consequential, or contingent to property. Furthermore, Land Pride shall not be liable for damages resulting from any cause beyond its reasonable control. This Warranty does not extend to loss of crops, any expense or loss for labor, supplies, rental machinery or for any other reason.

No other warranty of any kind whatsoever, express or implied, is made with respect to this sale; and all implied warranties of merchantability and fitness for a particular purpose which exceed the obligations set forth in this written warranty are hereby disclaimed and excluded from this sale.

This Warranty is not valid unless registered with Land Pride within 30 days from the date of delivery to the end user.

Land Pride Division
Great Plains Manufacturing, Inc.
Corporate Office: PO. Box 5060
Salina, Kansas 67402-5060 USA
